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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666,245

09/22/2003

Kazuhiko Kobayashi

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11/10/2004

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

BRASE, SANDRA L

ART UNIT

PAPER NUMBER

2852

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/666,245

Applicant(s)

KOBAYASHI, KAZUHIKO

Examiner

Sandra L. Brase

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-36 is/are allowed.
- 6) ☒ Claim(s) 1,2,14-17,37-41 and 43-47 is/are rejected.
- 7) ☒ Claim(s) 3-13,42,48 and 49 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/15/04, 9/30/04 & 2/11/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference character(s) mentioned in the description: 32. Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informality.

On line 9 of page 10, "dolor" should be changed to "color".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2852

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 2, 14, 17, 37-40, 44 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by Domoto et al. (US 5,689,767).

5. Domoto et al. (...767) disclose an image forming apparatus using a belt device (figure 1), where the belt device is passed over a plurality of rollers (14, 16 and 20) one of which is adjacent to a heat source (72) (figure 1), and a temperature part of a belt moving in the vicinity of the heat source varies little relative to a temperature of the other part of the belt, where the temperature of the belt in the vicinity of the heat source is made identical with the other part in a short period of time (col. 5, lines 17-62). A roller adjacent to the heat source is configured to obstruct heat transfer to the belt, where any roller of the belt can include an isothermalizing device (col. 5, lines 17-62). The belt constitutes a photoconductive element (col. 5, lines 17-20), and one of the rollers over which the belt is passed is adjacent to the fixing device (F) including a heat source (72) (col. 5, lines 17-62). The roller, containing the isothermalizing device, which can be adjacent to the heat source (72), radiates a greater amount of heat than the other rollers, and the temperature drops in a shorter period of time than a solid metallic roller, where the roller is hollow (col. 5, lines 17-62).

6. Claims 1, 14-16, 37, 44, 45, and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Oda et al. (US 6,266,498).

7. Oda et al. (...498) disclose an image forming apparatus using a belt device (figure 5), the belt device is passed over a plurality of rollers (214 and 215) one of which is adjacent to the heat

Art Unit: 2852

source (217) (figure 5), and a temperature of part of a belt moving in the vicinity of the heat source varies little relative to a temperature of the other part of the belt, where the part of the belt moving in the vicinity of the heat source is made identical with a temperature of the other part in a short period of time (col. 13, lines 13-19 and 39-46). The belt constitutes an image transfer body (216), and one of the rollers over which the belt is passed is adjacent to a fixing unit (217) including a heat source. A plurality of image carriers (222a, 222b, 222c and 222d) are arranged side by side and allow respective latent images corresponding to different colors to be formed thereon and developed by toners complementary in color to the latent images to thereby form corresponding toner images (col. 8, line 58 – col. 9, line 5), and the belt (216) conveys a sheet electrostatically adhering to the belt, moves via the plurality of image carriers to thereby cause the toner images to be sequentially transferred to the sheet one above the other and conveys the sheet further to a fixing unit (col. 10, lines 16-28).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 41 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Domoto et al. (US 5,689,767).

Art Unit: 2852

10. Domoto et al. (...767) disclose the features mentioned previously; however, do not disclose the exact wall thickness of the roller or the exact selection of materials of which the roller can be made. Domoto et al. (...767) also disclose the isothermalizing roller should be as thin as is structurally viable (col. 4, lines 46-48), thus through routine experimentation, the exact wall thickness can be determined. Also, Domoto et al. (...767) disclose that the roller is made of a material having high radial thermal conductance (col. 4, lines 46-48). The claimed selection of materials, aluminum, stainless steel and steel are considered to be materials of high radial thermal conductance. It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed wall thickness since such can be determined through routine experimentation and it would have also been obvious to one of ordinary skill in the art to have the roller made one of the claimed materials since these materials are considered to have high radial thermal conductance.

Allowable Subject Matter

11. Claims 3-13, 42, 48 and 49 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. Claims 18-36 are allowed.

Art Unit: 2852

Prior Art

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kurita et al. (US 4,025,180) disclose a heat shielding device to shield a heat from a fixing device.

Aoki et al. (US 6,501,923) disclose a cooling fan to cool a photosensitive belt.

Omata et al. (US 2002/0122679) disclose a cooling device (18) for cooling a belt.

Inquiry

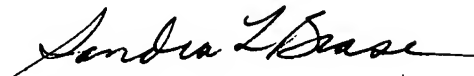
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is 571-272-2131. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley, can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

Art Unit: 2852

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in cursive script, appearing to read "Sandra L. Brase".

Sandra L. Brase
Primary Examiner
Art Unit 2852

November 8, 2004